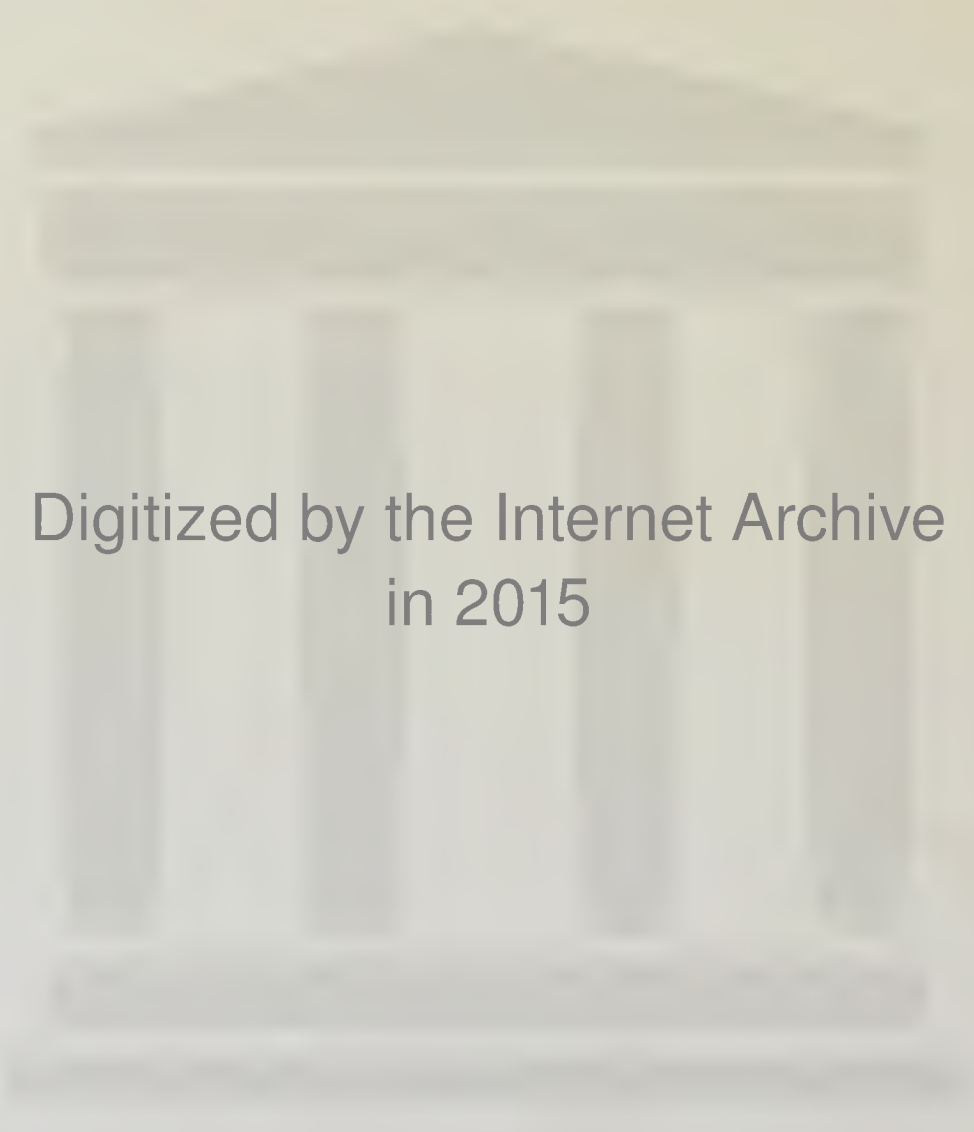




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Class of Practice of Medicine, University of Edinburgh.

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AN ETIOLOGICAL NOSOLOGY
OF
DISEASES OF THE SKIN.

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INDEX.

	PAGE
PHYSIOLOGICAL PROEM, ...	3
TERMINOLOGY, ...	4
ANATOMY AND SEMEIOLOGY, ...	5
CLASSIFICATION OF CUTANEOUS INFLAMMATIONS, ...	5
ETIOLOGY, ...	9
GENERAL CAUSES, ...	10
LOCAL CAUSES, ...	12
FIGURATE CAUSES, ...	13
ETIOLOGICAL NOSOLOGY, ...	14
HÆMATIC DISEASES, ...	14
SPECIFIC DISEASES, ...	16
CONSTITUTIONAL DISEASES, ...	17
SORDID DISEASES, ...	18
FIGURATE DISEASES, ...	20
DISEASES OF SPECIAL CUTANEOUS TISSUES, ...	21

AN ETIOLOGICAL NOSOLOGY OF DISEASES OF THE SKIN.

PHYSIOLOGICAL PROEM.—The skin is a complex structure, which may be likened to a composite secreting and excreting viscus spread out, so as to show the separateness and distinctness of its various elements. Or it may be considered as a musculo-mucous tube, with its subjacent tissues turned inside out over the surface of the body, so that the surface of the tube, with the outlets of the glandular ducts, is external, and the contractile and connective tissue subjacent or internal.

Besides the structures and tissues proper of the skin, as a composite viscus or extended mucous membrane, with various gland-ducts opening upon it, there are the cutaneous appendages which belong to it as the structure of the body in immediate relation with external things. From this point of view the skin of man exhibits, either actually or potentially (*i.e.*, is capable of exhibiting under given conditions), the appendages observed on the skin of lower unfeathered vertebrates. But even feathers and porcupine quills are analogous to hair, as well as horns and claws to nails, and hoofs and scales to the horny layer of epidermis.

Parts of the human skin which are bare—*i.e.*, have those tissues in an atrophied state which clothe homologous parts in other animals—may become clothed; and portions which are devoid of colour in man or in white races may become coloured, or *vice versa*. In short, all these various appendages may undergo progressive or retrogressive development, and also the glands in connection with them, as the sebaceous and sudoriparous glands.

From these considerations arises a division of skin diseases, according as they are general and visceral; or according as they are local—the appendages, with their glands, being only involved. The general diseases of the skin, considered as visceral diseases, are to be grouped with those of the mucous membranes in general.

Different tissues are affected in these general diseases, according as the mucous membranes or their glands are affected. In the majority of febrile cutaneous diseases, the *rete mucosum* and

sweat-glands suffer in common with various mucous surfaces—buccal, pharyngeal, respiratory, gastro-intestinal, genito-urinary. In the Syphilitic group, the hair-follicles and sebaceous glands are involved. There may be, however, strictly local diseases of the skin of this group, the mucous membranes remaining unaffected.

Special tissues are involved in cutaneous inflammations. The skin is constituted of tissues having distinct functions, and subject to the action of causes of disease peculiar to each. It is made up of three fundamental elements—the Epiderma, the Derna or Corium, and the Glandular System. The Epiderma, or cuticle, consists of (*a*) the horny layer or epithelium, which corresponds in composition with nails, hair, quills, hoofs, horns; and (*b*) the *rete mucosum*, or layer of cells derived from the surface of the derma, and which produces the horny layer. The cutaneous pigment is contained in these cells in the coloured races, or becomes the seat of coloration in the white. It is continuous with the inner or secreting membrane of the cutaneous glands, and is essentially a mucous membrane. The Corium or Derna belongs to the system of fibrous and contractile tissues, as of the arterial tunic, bronchi, &c. It consists of connective and elastic tissue, with muscular fibres. It has two layers, viz., the inner or reticular layer, in which the hair-follicles and glands are imbedded, and the superficial or papillary layer, containing the papillæ, the ducts of the glands, and the vascular rete, which supplies the constituents of the cells of the *rete mucosum*.

The Glands are involutions of the *rete mucosum*, or mucous membrane. Their cell-producing or lining membrane secretes albumen, pigments, oil, and sweat, and perhaps carbonic acid, with various odorons matters. The oil is poured out by the sebaceous glands—the sweat by the sudoriparous. The piliferous glands, or hair-follicles, and the sudoriparous glands, are deep in the connective tissue. The latter are convoluted tubes, consisting of a thick fibrous investment and an inner or cell-layer; between these are muscular fibres. They are also the scent-glands of the skin. The tissues of the skin, therefore, and its products, may be divided into three groups of fundamental tissues,—namely, 1. The *mucous* with its horny and other secretions; 2. The *vascular*; and, 3. The *fibrous* or *connective*, including muscular tissue. The causes of disease, and the anatomical and pathological changes, may be classed accordingly.

TERMINOLOGY.*—This is a chaos of names and synonyms, extremely puzzling to the student, and obstructive to progress in cutaneous pathology. The time, however, has not yet come for a scientific nomenclature, so that it is only possible to simplify

* The student is recommended to look out the origin of all the names of skin diseases in Dr Mayne's "Expository Lexicon," as a useful exercise in the etymology of medical terms.

the existing terms, by grouping those that are synonymous under one term selected from the rest as most descriptive either of the appearances, origin, progress, or termination of the disease. Hence terms indicating morbid variations in the colour, form, mode of spread on the surface, or extension of the disease, or clearly indicating the exciting or predisposing causes, are to be preferred. As to the general or universal diseases, the pathological results of morbid changes may also be named, because these are mainly the sequelæ of inflammatory action of various kinds. Thus, in the variolas and varioloids we have circumscribed inflammation, either effusive or suppurative. This part of the terminology of skin diseases should also define, when possible, the particular tissue of the skin involved in the disease—as the papillæ, the epithelium, vascular rete, derma, &c.; and must therefore, to this end, be based upon, and explain, the pathological anatomy of cutaneous diseases.

ANATOMY AND SEMEIOLOGY.—The results of cutaneous inflammatory action may be classed according as they are Primary or Secondary. To the Primary belong: 1. Redness, or pimply spots, Erythema—*macula*; 2. Pimple—*papula*; 3. Lumps or tubercles—*nodus, tuberculum*; 4. Blains—including (a) tetter or vesicle, as in Herpes—*vesicula*; (b) Water blebs or blisters, large vesicles—*bullæ, phlyctæna, pomphus*; 5. Pustules—(a) vesicular or *psyrdracious* pustules; (b) Purulent or *phlyzacious* pustules—Ex. Ecthyma; 6. Boil or carbuncle; 7. Hæmorrhages.

To the Secondary results of cutaneous inflammation belong, 1. The production of epithelial scales—Dandriff, dry scale, or squamous inflammation; 2. Crack or fissure of the derma; 3. Excoriation of the epiderma; 4. Ulcer; 5. Slough; 6. Crusts or scabs; 7. Cicatrix; 8. Freckle, stain, or discoloration.

These results of inflammatory action are often consecutive in the same case. Psoriasis, for example (a scaly disease) begins with a papula and sometimes ends with a discoloration; a rupious ulcer begins with a vesicle. Hence, in diagnosis from the pathological anatomy, the primary stages of the disease must be determined as well as the terminal.

CLASSIFICATION OF CUTANEOUS INFLAMMATIONS.—I. *Congestive Inflammations of the Skin*. In these there is an increased number of red corpuseles circulating or heaped up within the capillaries of the vascular rete of the part affected. It is the first stage of inflammation of any of the structures of the skin. The characteristic mark is increased redness.

1. *Erythema* designates the congestive redness which occupies the derma, in homogeneous patches or otherwise, and not limited to or specially involving the papillary layer or the vascular rete of glands.

2. *Spotted, Maculated, or Pimply Inflammation*, is (a) conges-

tive inflammation of the vascular boundary surrounding the excretory or secretory ducts, as those of the sweat and oil glands and hair-follicles, or (*b*) of the tactile papillæ. It is usually *distinct*; but when confluent, it passes into or is complicated with erythema. Thus the congestive inflammation in scarlatina is first distinct and papular; then, as the inflammation advances, the redness becomes confluent. It is the first stage of all purely eruptive diseases of the skin, whether acute or chronic, commencing with a red spot. It is the most common form in typhus exanthems.

3. The *redness* of cutaneous inflammation varies in tint according to the condition of the blood or of the capillaries of the part, or of both. Inflammation of the surface (epiderma) is marked by a vivid rose red (burns or blisters); of the derma, by a dusky or deep red; inflammation of the papillæ is of a bright red. When the blood is morbid, the tint assumes a livid hue: Ex., Rubeola nigra. When morbid capillaries allow the morbid blood corpuscles to be effused, there are various tints of yellow, green, and purple, or lividity. *Petechiæ* are spots of papillary inflammation in which there is effusion of red corpuscles. If the effusion be in patches, the purple spots are *vibices*. The erythema in gouty inflammation is of a deep or mahogany red, changing into yellow: Ex., Erythema nodosum, E. arthriticum. This is probably due to diathetic causes influencing the blood corpuscles of the part (uric acid). *Pigment* deposits in the epiderma take place in chronic cachectic or diathetic states, and modify the inflammatory tint; hence the "coppery" hue in syphilitic inflammation, the liver colour in pityriasis versicolor, &c.

4. *Œdema* is a frequent accompaniment of those acute congestive inflammations which depend upon the action of a fever-poison: Ex., Erysipelas—Variola. It indicates low capillary power, and is apt to precede effusive and destructive inflammations of a low type.

5. *Variations in Form of Congestive Inflammation*.—Whether it be circumscribed or diffused, the redness may take a particular form or figure, or be *figurate* (*figuratus*). (*a*) It may advance by a margin (*marginate*): Ex., Erysipelas proserpens and Erythema marginatum. (*b*) The margin may assume a characteristic form, as—i. *Crescentic*: Ex., Rubeola. ii. *Annulate* or *circinate*: Ex., Erythema circinatum, E. annulatum, E. iris. iii. *Gyrate*: Ex., Roseola gyrata. (*c*) It may be symmetrical in its progress—that is, spread equally over the two halves of the body: Ex., Symmetrical erysipelas. These figurate forms of inflammation are equally manifested whether the inflammation be congestive, effusive, exudative, suppurative, or ulcerative, and give rise to specific names: as Ex., Lichen *Annulatus*; Herpes *iris*; Psoriasis *gyrata*; Prurigo *scutulata*; Herpes *serpiginosus*, &c.

II. *White Inflammation*.—This occurs when empty capillaries take the place of the full or congested, or are intermingled with them. It may be *diffuse*, as in *Urticaria*; *papillary*, as in *Strophulus albidus* and *S. candidus*; *figurate*, as in *Herpes iris* or *Variola vaccinia*, in which red and white circles alternate. It may intermingle promiscuously with red papillary inflammation, as in the white pimples of *Eczema rubrum*. In a certain class of cases this white appearance is a circumscribed pallor, and due, probably, to a death-like condition of the capillaries. It is seen as a central point in anthrax; in certain forms of human glanders; in the first stage of gangrene of the nose in the course of typhus, or from frost-bites, &c. It also occurs in cases of imperfect innervation of the cutaneous capillaries in which serum is poured from them, whether into the cellular tissue (*anasarca*) or from the surface (white effusive inflammation): Ex., *Pemphigus*. The emptying and filling of the capillaries may be intermittent or fleeting: Ex., *Erythema evanidum*, *Urticaria evanida*.

III. *Congestive Inflammation of the Skin, with Plastic Exudation*.—This is characterised by redness and swelling, which differ according to the portion of the skin affected. (a) *Papillary* exudation takes place when the papillary layer is the seat of inflammation; the result is a small hard red elevation of the skin, termed a *papula*.

These are seen in *Strophulus*, *Lichen*, and *Prurigo*. The papulæ may be flat, pointed, or globular. In these forms the papillæ are usually exclusively the seat of the exudation; but it may take place also into the connective tissue or sheath of the sebaceous glands (*Acne rosacea*, *A. indurata*). The congestion usually extends to the interspaces, and erythema is conjoined with the papulæ. (b) *Tubercular* inflammation of the derma occurs when there is exudation into the deeper connective tissue of the derma, or of that constituting the fibrous investment of the sudoriparous or piliferous glands: Ex., *Tubercular syphilis*, *Erythema nodosum*, *E. tuberculatum*. (c) The exudation may be diffusely circumscribed, and occupy the connective tissue generally, as in *Urticaria*, *Condyloma*; or (d) may extend to the subcutaneous cellular tissue, ending in *anasarca* and suppuration, as in *Erysipelas phlegmonoides*; or in induration, as in *True Leprosy* and *Barbadoes Leg*.

IV. *Effusive Inflammation of the Skin*.—When, after congestion or irritation of a portion of the vascular rete of the epiderma, or of the papillar or excretory ducts, effusion of serum takes place, and it is retained beneath the epithelium or horny layer, a bleb, blister, or vesicle is formed. The extent, colour, form, and other characteristics of this effusive inflammation,

coincide, *mutatis mutandis*, with those of congestive inflammation. When the papillæ are specially involved, and the vesicles burst, leaving a bare exuding surface, the disease is Eczema; when the vesicles form in clusters, and are confluent, it is Herpes. If they be large and solitary, it is Pemphigus or Pompholix.

Effusive inflammation will pass into the suppurative; or, in other words, pus is formed on the inflamed surface. Hence certain diseases, as the Variolas, are vesicular in the earlier stages, and suppurative in the later, ending in sloughing, excoriation, or ulceration.

Effusive inflammation will be figurate, following in this respect the law of form of the congestive inflammations. The vesicles will multiply by a margin from a centre, as in Herpes circinatus, or one vesicle will be the centre for an ulcerative inflammation spreading by a margin, as in Pemphigus or Rupia. The vesicles will also be developed symmetrically, as in Herpes zoster, or be intermingled with purple petechiæ, as in *Variola cum petechiis*.

V. *Suppurative Inflammation of the Skin*.—The term is limited to abscess of the derma; of which there are two forms,—namely, pustules, and abscesses proper, in which the subcutaneous tissue and lymphatic glands are involved.

Pustular suppurative inflammation is always circumscribed. (a) It may be acute as to each pustule, and as to all: Ex., Variolous pustules. (b) It may be acute as to each pustule, but chronic as to all, when pustules follow each other in succession: Ex., Parasitic pustular inflammations—Sycosis, Scabies, Acne. (c) The suppuration may be superficial, and restricted to the papillary layer, when the pustule is usually sero-purulent or pyodermic: Ex., Impetigo. (d) Or it may be deeper-seated in the reticular layer, causing the phlyctenular pustule: Ex., Ecthyma. (e) It may be complicated with other forms of inflammation—i. Exudation into the connective tissue: Ex., Acne indurata, Boil, Ecthyma chronicum. ii. Effusive papillary inflammation: Ex., Scabies pustulosa, Eczema impetiginoides, Impetigo erysipelatodes. (f) It may differ according as it terminates—i. In cicatrization: Ex., Variola, Ecthyma. ii. In ulceration and crusts: Ex., Crusta lactea, and other forms of Impetigo. iii. Gangrene or sloughing: Ex., Ecthyma luridum, Carbuncle, or Anthrax. (g) It may be figurate: Ex., Impetigo figurata.

Abscesses of the derma are (a) circumscribed—Ex., Glanders; or (b) diffused—Ex., Erysipelas phlegmonoides; or (c) limited, as when caused by Ectozoa, the Guinea worm, ova of chiggre, &c.

VI. *Ulceration of the Derma*.—The term is limited to chronic ulcerations. (a) May be circumscribed and superficial, as in chronic Impetigo, rodent ulcer; or (b) circumscribed and deep-

seated, with exudation into the reticular tissue, when it is ulcerative tubercular inflammation: Ex., Lupus exedens, Leprous ulcers, Gouty ulcers. (c) May be uncircumscribed—Strumous ulcers.

Ulceration may spread by a margin, either superficially, as in Herpes serpiginosus, Lupus serpiginosus, rodent ulcers, syphilitic ulcers. In this and other respects, spreading ulceration follows the laws of spreading inflammations, and may be figurate.

VII. *Destructive Inflammation of the Derma.*—(a) The inflammation terminates in death of the tissues. May be circumscribed, as in furuncle; or spread by a margin, as phagædenic ulcer of skin. (b) The inflammation terminates in atrophy of the derma: Ex., Lupus non exedens, Keloid.

VIII. *Cutaneous Hæmorrhages.*—The capillaries of the vascular rete give way under certain morbid states, and hæmorrhages take place. When the connective tissue or surface of the papillary vascular rete is the seat, the hæmorrhage is *punctiform*: Ex., Purpura in P. hæmorrhagica. When it is situate in the vascular rete of the sudoriparous glands, it is *nodose*; when diffused over the surface, as in advanced scorbutus, the patches are *vibices*. Cutaneous hæmorrhages may be symmetrical, and due to changes in the action of the nervous system; in this and other respects they follow the order of congestive and effusive inflammations.

IX. *Discolorations of the Skin.*—These may depend either upon the absence of pigment in the epiderma where it ordinarily occurs (Leucopathia), or the presence of pigment where it ordinarily is not (Yellow bronzing; Melasma). When the change is in the colour of the hair, it is generally to whiteness (canities). Pigment may be poured out by the sebaceous and sudoriparous glands; in the former case (*Stearrhœa nigricans*, &c.) it is like the epithelial or hair pigment, in the latter (*chromidrosis*) it belongs to the urinary pigments.

Epidermal pigment deposit results from congestive and effusive inflammations of the epiderma; as in solar erythema and lichen, herpes, blisters. Ordinary pigmentation is prevented by ulcerative inflammation of the epiderma, the pigment layer of cells (rete mucosum) being destroyed, when *leucopathia* results. These colour changes may be figurate, in accordance with the general laws of figurate cutaneous inflammations. They are symmetrical when the discoloration is due to changes in the innervation of the vascular rete of the epiderma or the glands.

ETIOLOGY OF SKIN DISEASES.—The causes of skin diseases may be classed under the three heads of General, Local, and Figurate.

I. *General Causes*.—These may be either Hæmatic, Toxic, or Constitutional (diathetic).

1. *Hæmatic Causes* are those agents which act upon the cutaneous tissues through the circulation, being either present or multiplying in the blood, and which induce hæmatic cutaneous diseases. These include the entire group of febrile cutaneous diseases, as the Exanthemata, and all acute or chronic cutaneous diseases dependent upon blood-poisons. When the poison increases or multiplies, and is communicable from one person to another, the disease is infectious or contagious: Ex., Variola, Syphilis. When after one attack (variola), or several attacks (syphilis) of the cutaneous inflammation, the patient is no longer morbidly susceptible of the action of the poison, it is non-recurrent.

2. *Toxic Causes*.—When certain mineral and vegetable poisons are received into the blood, and circulate with it through the capillaries of the vascular rete of the skin, they excite, under given conditions, various forms of inflammation, which may be termed Toxic cutaneous inflammation. Of this class of causes there is a great variety: amongst these, (a) Mineral Poisons, as mercury, arsenic, iodine, sulphur, and their salts; (b) Narcotics—Belladonna, opium, hydrocyanic acid; (c) Terebinthines, tar, copaiba; (d) Dietetic Poisons—Poisonous fish, fruit, fungi, &c. In addition to erythematous, papular, or effusive inflammations (erythema, lichen, Herpes eczema, pemphigus), these toxic agents for the most part excite also pruritus, formicatio, or stinging.

3. *Constitutional or Diathetic Causes*.—It not unfrequently happens that the predisposing and exciting causes of skin-diseases arise or take effect only in persons of certain habits, or of a particular diathesis, or having special cachectic conditions of the blood or tissues, or hereditarily, or at a certain age, or in one or other of the sexes. These constitutional conditions may be classed as follows:—

(a.) Nervous Diathesis.—Predisposes to—i. Excessive activity of the vascular rete on the application of causes; ii., Excessive receptivity of the nerve-centres, and therewith susceptibility to action of causes, otherwise harmless, of cutaneous inflammations and neuroses. Hence idiosyncrasies as to articles of food, drugs, and various local irritants of the skin; tendencies to prurigo and pruriginous affections—as Urticaria, Erythema evanida. The cutaneous diseases proper of this diathesis are included under the *Neuroses*.

(b.) Arthritic or Gouty Predispositions.—The determination of urates to the skin, as a *causa morbi*, is amongst the best established facts of pathology; uric acid has been found in the blebs of pemphigus. The gouty skin-diseases are a distinct group, and may be classed according to the tissue affected—namely, the

epiderma, or the connective tissue of the derma; and according as the inflammation is congestive, effusive, or desquamative; or acute or chronic: middle life and old age are most predisposed. The ulcers on the legs of old persons, with hardened edges and condensed connective tissue below, are often arthritic; so also the fetid perspirations of the feet. The arthritic diathesis predisposes more especially to all those febrile cutaneous inflammations in which the connective tissue of the derma, or of the sudoriparous glands are involved: Ex., Syphilis. It also predisposes to diathetic purpura, to pigmentary changes of a diathetic character in the hair and epithelium; and in women to nervous hamorrhages from the skin. Children of gonty parents are apt to have depositive inflammations, as Strophulus and Lichen, and severe attacks of scarlatina and rubeola.

(c.) Strumous Diathesis and Cachexia.—Infancy and childhood manifest this class of diathetic predispositions most strongly. Under certain conditions (as dentition), it predisposes to rapid development of the epithelium (dandriff), to active inflammation when hæmatic or local causes are applied, and to a rapid evolution of its successive stages—viz., effusion, suppuration, and ulceration. Hence, strumous children are particularly liable to severe attacks of the effusive and suppurative Exanthemata. They are, for the same reasons, predisposed to cachectic diseases of the skin, as chronic pemphigus and ecthyma; to parasitic diseases of all kinds, as pediculi of the scalp, scabies, favus, impetigo, together with enlargement and ulceration of the cutaneous lymphatic glands. In strumous adults, low forms of diseases are manifested, as lupus, cutaneous cancer, zeroderma, inveterate squamous diseases, atrophic diseases of the hair, parasitic diseases, as prurigo, morbus pediculosus, &c. The group includes all cachectic diseases.

(d.) Syphili-strumous Diathesis.—It is necessary to distinguish between cutaneous diseases due to the action of the syphilitic poison, which are specific and communicable, and those that are ordinary diseases of the skin occurring in persons of a syphilitic habit or diathesis, and which are modified thereby as to their symptoms and course. In the syphili-strumous diathesis there is a tendency to defective nutrition of the connective tissue, both of the derma proper and of the glands therein. Hence a dingy pallor of the surface, imperfections in the horny layer, defective nutrition of nails and hair, defective transpiration and sebaceous secretion. Inflammation and its sequelæ—exudation and ulceration, occupy for the most part the connective tissue, and are of a low type. These constitute a group of cutaneous diseases to which a peculiar or special cachectic character is given by the diathesis.

(e.) Age and Sex.—Certain groups of glands and hair-follicles are under the direct influence of the generative glands, being dependent upon them for development, or activity, or influenced by

physiological states of the generative organs. In this way certain ages, as well as the sexes, manifest particular forms of cutaneous disease. The sebaceous and scent-giving sudoriparous glands situate in the region of the sexual hair, are most commonly thus influenced. Hence various forms of acne, stearrhæa, baldness or atrophy of the hair, and discolorations (nigrities). The mammæ are highly developed sebaceous glands, and are sometimes multiple in women, being developed abnormally in the axillary regions and groins. The sudoriparous glands also pour out pigments and scents under the like influences, and fat, in women, is deposited in the subcutaneous cellular tissue.

(f.) Hereditary Tendencies.—These are to be distinguished into (a) the *Diathetic*, when there is a tendency to certain classes of diseases; and (b) the *Special*, when there is a tendency to particular forms of disease, as ichthyosis, lepra, psoriasis, erythema of the nose and face, &c.

II. *Local Causes of Cutaneous Diseases*.—These may act either generally, or upon special glands or tissues, developing special forms of disease. 1. All hæmatic poisons may act locally, and excite local symptoms only: Ex., the plague bubo, erysipelatous, scarlatinal, and diphtherial inflammation. 2. Dynamic causes may act either locally only, or, by their local action, intensify the operation of general or hæmatic causes. Hence the origin of local eruptions on the face, and the aggravation of these in variola, rubeola, &c. Heat, light, abstraction of heat, or cold, friction, and the atmosphere, are of this class. 3. Accumulated animal matters on the skin; as sordes, excreta, crusts, oil, scales. These act either as irritants, or predispose to the production of parasitic organisms. 4. Parasitic organisms. These are of two kinds, the animal, or *ectoza*, and the vegetable, or *epiphytes*. They differ as they are indigenous and have their habitat on the human skin, in which case they multiply thereon; or as their habitat is on other animals, as the horse or sheep, or elsewhere, as in sugar, flour, when they do not necessarily multiply in or on the skin. This difference determines whether the disease terminates spontaneously, or requires to be cured by preventing the multiplication or reproduction of the parasite. The inflammations and other changes induced by parasites may be figurate or not. If ectoza be the cause, papular, effusive, and suppurative inflammations result (scabies), or abscess (ova of the *Pulex penetrans* or chiggre, and *Filaria medinensis* or Guinea worm) of no determinate form. If the epiphytes, these morbid appearances are often figurate in various ways. This is due to the conditions of life and multiplication of the parasitic organisms. 5. Mechanical and chemical irritants. These are of various kinds, as powders, dyes of clothing, detergent soaps, needle-like products of animals

and vegetables, poisons inserted locally, as of the stinging nettle, &c.

III. *Causes of Figurate Diseases of the Skin*.—This is a proposed new group of cutaneous diseases, to include those in which the cause of disease multiplies locally in the cutaneous tissues, and spreads symmetrically, so as to assume a determinate outline or figure. This may be—i. *Symmetrical*, as to the body or limbs; when the state of the sympathetic nerves of the skin may be considered the determining cause of the form assumed: Ex., Herpes zoster, or zona. ii. *Marginate*. In these there is probably a multiplication of the *materies morbi* in the skin itself, as part of the morbid process, in which case the disease is locally contagious; or, in other words, the diseased condition extends along the skin by a margin, in consequence of progressively direct inoculation of the healthy tissue by a *materies morbi* generated in the tissues successively affected—as in Erysipelas proserpens, Lupus serpiginosus. iii. *Circumscribed* or *circular*. (a) The *crescentic* form, as in rubecula, seems due to the anatomical distribution of the capillaries or of their nerves, and belongs, therefore, to the symmetrical class. (b) The *circinate* is due to the spread of the *materies morbi* from a centre by a circumference, as in Psoriasis circumscripta, Herpes circinatus, H. Iris. (c) This will be *annular* or ring-like when that portion of the skin which has been first affected (the central) is restored to health, while the morbid action extends at the periphery, as in Lepra vulgaris. (d) When the spread in the annular form is interrupted at a segment of the circle, and two or three of these coalesce, the form assumed is the *gyrate*. (e) When a number of centres and circumferences of spread have become confluent, so as to occupy a considerable surface, the general is *serpiginous*, as in Lupus serpiginosus.

The *materies morbi* which thus multiply in or on the skin or its tissues, may also be classed—i. The *Hæmatic*, in which a local inoculation having occurred, the *materies* multiplies locally, and the disease spreads symmetrically; but at the same time the blood is affected, and the *materies*, multiplying therein, is deposited from the blood on other portions of the surface. There are two forms of these hæmatic figurate inflammations,—namely, the acute and the specific. Under the acute are to be classed the figurate exanthems resulting from the virus generated in the exanthematic fevers. The specific are illustrated by true syphilis, in which the primary or local sore (chancre) is circular or circinate, and the exanthems of the secondary or constitutional stage are also circinate. These are probably modified by diathetic states.—ii. The *Diathetic*. In this class there is a mode of morbid nutrition developed in the cutaneous tissues, which is manifested as a special form of inflammation. And it seems

probable that when diathetic inflammation is developed locally by local causes, the adjoining tissues take on morbid action, in consequence—not of the action of the local cause—but of the inflammation it has induced extending by contiguity. This seems to be the mode of spread in certain forms of diathetic erysipelas or erythema, usually termed gouty, and in herpes and pemphigus.—iii. The Epiphytic. In this class the *materies morbi* is a fungus, lichen, or mould, and follows the laws of multiplication of the Cryptogamia. In epiphytic figurate diseases, the circular form (it has been suggested) is probably due to the same cause as the circular form of lichens on rocks and stones, of “fairy rings” in meadows, and the like. The extension or cessation of the disease will depend upon the multiplication and dying out of the cryptogamous plants; and these will depend upon whether the skin offers conditions favourable or unfavourable to their continued existence and reproduction. Hence it is only under certain conditions of patients that these epiphytic diseases can occur at all, or, in other words, be induced or communicated. A general law seems to be common to the entire class,—namely, that they multiply most rapidly on diseased organisms, whether they be animal or vegetable. Hence cachectic or diathetic states highly predispose to epiphytic diseases. These states also seem not only to determine the kind of inflammation which results from the action of the parasites, but also the form which they or their reproductive organs assume. Or in other words, there is great variety as to the form and *modus operandi* of epiphytic organisms of the same species, so that it has been stated that the Achorion of Favus can be developed into the *Torula cerevisiæ*, or into the microsporons.

ETIOLOGICAL NOSOLOGY.

I. HÆMATIC OR FEBRILE DISEASES OF THE SKIN.—A virus multiplying in the blood and the cutaneous tissues excites fever and inflammation of the skin (an exanthem).

1. *Herpetic Fevers*.—Exanthem—Herpes, clustered vesicles, usually about the lips—Herpes labialis. Occurs in both endemic and epidemic fevers.
2. *The Exanthemata*.—Exanthem very constant, but not essential; one attack prophylactic against a second.

- i. Variola and the Varioloids.—Exanthem at first papular, then vesicular, pustular, and ulcerative. In irregular forms, effusive, papular, or petechial, erysipelalous.
 - ii. Rubeolar Fevers.—Morbilli; Rubeola; Inflammation congestive, at first roughly papular or puliclar, then confluent, crescentic. In irregular cases, erythematous or scarlatinal, vesicular, miliary, petechial.
 - iii. Scarlatinal Fevers.—Congestive inflammation of the epiderma—at first papular, then confluent, sometimes intermingled with vesicles, with inflammation of the throat-glands, external or internal, or both.
 - iv. Diphtheria cutanea.—Exanthem, a pellicular inflammation of portions of the skin, conjunctiva, &c. May be wholly local, but usually accompanies the buccal, pharyngeal, and tracheal forms of diphtheria.
3. *Exanthematous Typhus Fevers*.—Epidemical fevers, one attack prophylactic of a second. Cutaneous inflammation, congestive, macular, papular, or carbuncular.
- i. Exanthematous Typhus—Spotted Typhus. Exanthem congestive, macular, or papular, of a deep or mulberry-red, appearing about the fifth day. May be petechial or vesicular (Petechnal Typhus; Miliary Fever).
 - ii. Glandular Typhus—Levant Plague. Exanthem congestive and rubeoloid; cutaneous glands and lymphatics inflamed (Buboes and Carbuncles).
 - iii. Bilious Typhus—Relapsing Fever, European Yellow Fever? Exanthem, when present, papular, rubeoloid.
 - iv. European Gastro-enteric Typhus—Typhoid Fever. Exanthem papular, of a rose-colour, appearing first about the seventh day.
 - v. Occidental Gastric Typhus—Yellow Fever.—Exanthem, when present, rubeoloid or papular. Superficial and diffused cutaneous hæmorrhage?
 - vi. Asiatic Gastro-enteric Typhus—Asiatic Cholera—Epidemic Cholera.—Exanthem occurs in typhus stage; macular, papular, diffused, and desquamative.
4. *Septic Cutaneous Fevers*.—Due to a sepsis or putrescent ferment received into the blood.
- i. Erysipelas proserpens.—Exanthem an erythema, with œdema or effusive inflammation; serpiginous, marginate.
 - ii. Erysipelas phlegmonoides.—Exanthem red or white; subcutaneous cellular tissue involved.
 - iii. Erysipelas Glandularis—Inflammation phlegmonoid, erythematous, effusive; cutaneous lymphatic glands enlarged and suppurating.

5. *Epizootic Cutaneous Fevers*.—Virus derived from cattle and horses.

- i. *Equinia* or *Maliasmus*.—Human Glanders.—Inflammation œdematous and erysipelalous, with bullæ; suppurative and destructive as to termination.
- ii. *Carbuncular Fever*.—Inflammation erysipelalous, carbuncular, gangrenous; Anthrax; Phlegmonous erysipelas.

II. SPECIFIC DISEASES OF THE SKIN.—Impure Fevers. A virus multiplying in the blood, and exciting recurrent attacks of fever and inflammation; insusceptibility to the action of the virus finally established.

1. *True Leprosy*.—Inflammations usually recur during the lifetime in various forms: (a) Erythematous; (b) Desquamative; (c) Pigmented (black leprosy); (d) Tubercular or plastic, with or without ulceration; (e) Effusive (in blebs), with anæsthesia of the skin and gangrene of the extremities; (f) Parasitic (*Acari* and *pediculi*).
2. *The Syphilids*.—Inflammation recurrent in acute febrile paroxysms; various as to race, climate, and constitution.
 - i. *Benign Syphilis*. Inflammation for the most part limited to the epiderma and papillæ; connective tissue, and fibrous or sero-fibrous membranes generally, not commonly involved. (a) *Virulent Gonorrhœa*. Primary ulcer, a patchy excoriation; exanthem rubeolar or macular. (b) *Papular Syphilis*. Primary ulcer simple, exanthem papular. (c) *Pustular Syphilis*. Primary ulcer with raised but not indurated edges; exanthem effusive and suppurative, ending in crusts and superficial ulcerations. (d) *Phagædenic Syphilis*. Primary ulcer either corroding or gangrenous, exanthem pustular or tubercular, ending in crusted marginate ulcers (*Rupia*); not always benign.
 - ii. *True, or Scaly Syphilis*. Inflammation occupies connective tissue of the derma. Primary ulcer excavated, with thickened edges and base (specific plastic exudation). Exanthem at first congestive, ending in (a) desquamation; (b) tubercles and ulceration; (c) condylomata; (d) fungoid growths; (e) periosteal inflammation, and deposits in connective and fibrous tissues generally.
 - iii. *Ethnic and Climatic Syphilis*. (a) *African Syphilis*. Yaws, or Pian; Frambœsia. Inflammation at first congestive and superficial; then deeper seated, with rupia-like ulcerations and yaws or fungoid figurate growths (mulberry-like). (b) *Norwegian Syphilis*.

Radesyge or wheel-like cachexia. Exanthem figurate, papular, pustular, tubercular; ulcerations rupious, marginate, serpiginous. (c) *Levant Syphilis*—Scherlievo. *Frambæsia* of Eastern Europe. Exanthem pustular, tubercular; ulcers figurate, rupious; condylomata and yaw-like fungoid growths. (d) *Scottish Frambæsia*—Sibbens. Exanthematous inflammation both deep-seated and superficial; roseola, followed by condylomata and fungoid figurate growths (like raspberries). (e) *Button Scurvy*. Irish *Frambæsia* or Sibbens.

3. *Contagious (?) Furunculoid*.—Inflammations of the skin occurring epidemically. Exanthem in successive crops, and various; impetiginous, ecthymatous, furuncular, carbuncular, gangrenous. Cause unknown; probably communicable.

III. CONSTITUTIONAL DISEASES OF THE SKIN.—Diseases dependent on constitutional conditions, either predisposing or exciting, and due to (a) a *materies morbi* produced in the blood or tissues; or (b) to special modes of nutrition of the skin and its structures, occurring with or without fever.

1. *Rheumatic and Gouty Diseases of the Skin* are acute and chronic, and congestive, effusive, and capillary.

- i. *Congestive Gouty and Rheumatic Diseases*. (a) *Erysipelas*; (b) *Roseola*; (c) *Urticaria*—U. evanida, U. perstans, U. tuberosa (cachectic); (d) *Erythema*—E. fugax, E. læve (cachectic), E. nodosum, E. tuberosum, E. papulatum, E. podagricum, E. chronicum.

- ii. *Papular Rheumatic or Gouty Diseases*. (a) *Lichen*—L. urticatus, L. pruriginosus, L. agrius or eczematoides, L. evanidus, L. tropicus, L. infantilis or *Strophilus*; (b) *Prurigo*. (These two groups of congestive and papular diseases are apt to occur in persons who have an idiosyncrasy for special articles of diet or for drugs, and to be associated with cutaneous and other neuroses.)

- iii. *Effusive Gouty and Rheumatic Diseases*. (a) *Herpes*—H. zoster, H. phlyctenoides. (b) *Eczema*—E. rubrum, E. senilis, E. infantilis, E. serpiginosum. (c) *Pemphigus*—P. acuta, P. chronica.

- iv. *Desquamative Gouty and Rheumatic Diseases*. These are consecutive to the congestive, papular, and effusive forms. (a) *Pachulosis* (inveterate eczema); (b) *Psoriasis diffusa*; (c) *Pityriasis versicolor* (cachectic).

- v. *Capillary Gouty and Rheumatic Diseases*. (a) *Acute Purpura hæmorrhagica*; (b) *Purpura urticans*; (c)

Diathetic hæmorrhages (hæmorrhagic diathesis);

Hysteric hæmorrhages (neuro-arthritic diathesis).

2. *Cætheetic Diseases of the Skin*—are diseases in which the cutaneous inflammations or structural changes are modified by cætheetic states of the blood and tissues. They are infantile, senile, strumous, syphili-strumous, cancerous, visceral; and, for the most part, effusive, squamous, suppurative, ulcerative, or dystrophic.

- i. Cætheetic, Effusive, and Suppurative Diseases. (a) Crusta lactea (infantile). (b) Impetigo—I. sparsa, I. figurata. (c) Ecthyma—E. chronicum, E. cætheeticum, E. lividum, E. furunculoides. (d) Rupia—R. syphilitica, R. escharotica, R. prominens. (e) Carbuncle.
- ii. Cætheetic Squamous Diseases. (a) Favus? (b) Psoriasis inveterata; (c) Pellagra.
- iii. Cætheetic Diseases of the Capillaries and Blood. Purpura—P. senilis, P. scorbutica, P. splenica.
- iv. Cætheetic Ulcers. (a) Strumous. (b) Gouty. (c) Chlorotic (on legs). (d) Splenic (on legs). (e) Syphilitic. (f) Leprous, cancerous.
- v. Dystrophic Diseases. (a) Zosteroderma (wrinkled skin). (b) Alopecia—A. senilis, A. syphilitica. (c) Epithelioma; (d) Keloid; (e) Vitiligo, or Leucæ.

IV. *SORDID DISEASES OF THE SKIN*—are diseases primarily dependent upon an unclean condition of the skin, either as to excreta, products of inflammation, parasitic organisms, or inorganic matter, or as to all these; often associated with cætheetic states of the general health or of the skin, and appear more particularly in children and the aged of cætheetic habits.

1. *Parasitic Diseases of the Skin*.—Parasitic organisms multiplying and exciting morbid changes in the skin.

- i. *Ectozoeic Diseases*.—Inflammations dependent upon the presence of an animal parasite or *ectozoon*.

(a) Scabies group. Varieties of itch, caused by a Sarcptes or Acarus. a. Scabies vulgaris, caused by human Acarus. Varieties—S. papularis (rank itch), S. vesiculosa, S. pustulata. b. Epizootic Scabies, caused by Sarcptes from animals; viz., Acarus setosus, or bovis (cow); A. cynotis (dog's ear canker); A. hippopodis (horse's foot canker); A. felis, mange. c. Artisan's Scabies, caused by Acari (?) from sugar, flower, silk cocoons, &c.; Grocer's itch; Baker's itch; Silk cocoon winder's itch.

(b) Acari or epiphytes in sebaceous follicles.

- Doubtful group. *a.* Acne—*A. vulgaris*, *A. rosacea*, from *Acarus folliculorum*? *Sycosis faciei*? *Impetigo faciei*? *b.* Lupus—*L. serpinginosus*? *L. exedens*? *Molluscum contagiosum*?
- (*c*) *Phtheiriasis*—*a.* *Morbus pediculosus*. From pediculi: *P. capitis*, *P. pubis*, *P. corporis*. *b.* *Prurigo*—*P. vulvæ*? *P. podicis*?
- (*d*) *Puliculae Diseases*. From the pulex—*a.* *Maculæ puliculae* (flea-bites). *b.* *Abscessus pedis* (ova of *Pulex penetrans*).
- ii. *Epiphytic Diseases*—Diseases of the skin, caused by the multiplication of microscopic fungi and algæ on the epiderma, in the sebaceous ducts and hair-follicles, and on the hairs. They are congestive, effusive, and ulcerative, and lead to desquamation, and to atrophy of the hair.
- (*a*) *Ringworms*.—Circular inflammations of the epiderma, usually desquamative, but sometimes congestive only, or ending in effusion, suppuration, or ulceration, with impaired nutrition of the hair. Seat the epiderma and hairs or hair-papillæ; cause a microscopic fungus—the *Tricophyton tonsurans* (Gruby) or *Tricophyton decalvans* (Malmsten) or *Microsporon Andouini*.
- a.* Ringworms of the scalp, characterised by desquamation and baldness. *Trichosis* (Mason Good). *Trichosis furfuracea*; *Trichonosis furfur*; *Tinea tonsurans*; *Porrigio furfurans*, *P. scutulata*, *P. circinata*, *P. tonsorea*, *P. decalvans*; *Alopæcia circumscripta*, *A. areata*, *A. gyrata*; *ophiasis*. *b.* Ringworms of the face, limbs, and trunk. Inflammation papular, ending in scales or vesicles. *Varieties*, *Lichen* and *Herpes*—*L. circumscriptus*, *L. annulatus*, *L. gyratus*, *L. marginatus*, *L. figuratus*, *L. serpinginosus*; *Herpes circinatus*, *H. circinatus phlyctenoides*, *Pemphigus circumscriptus*. *c.* Squamous ringworms. Doubtful as to epiphytic causes. *Varieties*: *Lepra vulgaris*; *Psoriasis gyrata*, *P. circumscripta*, *P. centrifuga*, *P. palmaris*.
- (*b*) *Tinea or Favus*.—Figurate or uncircumscribed diseases of the sebaceous glands and hair-follicles of the scalp, face, and trunk, extending to the epiderma, and ending in scales, crusts, excoriations, pustules, or ulcers. Causes: the *Achorion Schönleini* (Remak).

- a. Tinea or Favus of the Scalp. Yellow circular crusts, the centre at the orifices of the hair-follicles, coalescing or figurate. Erythema, Excoriation, or Ulcer of the Epiderma. Varieties—i. *Distinct Favus*—F. urceolatus, F. disseminatus, F. furfuracea, F. dispersus, F. isolatus; Porrigo favosa—P. lupinosa. ii. *Patchy or figurate Favus*. Favus confertus—Porrigo scutulata, P. scutiformis, P. scutulata conferta. iii. *Confluent Favus*—Porrigo squamosa, P. larvalis; Eczema chronicum. (?)
- (b.) Tinea or Favus of the Face, Body, and Limbs. Favus urceolatus, mentagra, Sycosis menti, S. furfur, S. pustulosa.
- (c.) *Diffused Epiphytic Squamous Diseases*.—Cause the Microsporon furfur (Eichsted) or Achorion Schönleini. Pityriasis—P. rubra capitis, P. palpebrarum, P. versicolor; Onyxia; Alopecia?

V. FIGURATE DISEASES OF THE SKIN.—Are Hæmatic, Diathetic and Parasitic, and, in being developed, spread by a margin or assume the form of a circle, or of a segment thereof.

1. *Figurate Congestive Inflammations*. (a) Rubeola; Roseola—R. vaccinia, R. annulata. (b) Erythema—E. iris, E. circinatum, E. annulatum (Palmare), E. marginatum. (c) Erysipelas—E. marginatum, E. proserpens. (d) Urticaria gyrata.
2. *Figurate Depositive Inflammations*.—(a) Papillary. i. Lichen—L. annulatus, L. circumscriptus, L. figuratus, L. gyratus, L. serpiginosus, L. marginatus, L. tuberculatus annulatus. ii. Strophulus volaticus (circinatus). (b) Dermic. i. Condyloma. ii. Tubercle.
3. *Figurate Effusive Inflammations*. (a) Herpes—H. iris; H. circinatus; H. proserpens; H. serpiginosus; H. tonsurans. (b) Pemphigus—P. circumscriptus. (c) Eczema—E. serpiginosus.
4. *Figurate Squamous Inflammations*. (a) Lepra vulgaris. (b) Psoriasis—P. gyrata, P. circumscripta, P. centrifuga, P. annularis.
5. *Figurate Suppurative Inflammations*.—(a) Porrigo: P. Favosa? (Favus), P. scutulata, P. circinata. (b) Impetigo figurata.
6. *Figurate Ulcerative Inflammations*.—(a) Rupia; (b) Lupus—L. exedens, L. exedens serpiginosus; (c) Ulcus rodens; (d) Frambæsia (fungoid); (e) Hunterian chancres.
7. *Figurate Dystrophic Diseases*.—(a) Porrigo decalvans; (b) Alopecia; A. circumscripta; A. areata; A. gyrata;

(c) Ophiasis; (d) Lupus non exedens; (e) Kelis ovalis;
(f) Melanosis circumscripta.

VI. DISEASES OF SPECIAL CUTANEOUS TISSUES.

1. *Horny and Papillary Layer*.—(a) Papillary nævus; (b) Pachulosis; (c) Verruca (Warts); (d) Tylosis (Laminated Corns); (e) Clavus (Fibrous Corns); (f) Onyxis.
2. *Vascular Rete*.—Vascular nævus.
3. *Colour Rete*.—(a) Pigmentary nævus; (b) Ephelis (Sunburn); (c) Lentigo (Freckle); (d) Chloasma (Pityriasis versicolor); (e) Melasma (yellow and swarthy); (f) Melanosis; (g) Leucopathia.
4. *Diseases of Cutaneous Glands*.—(a) *Sudoriparous Glands*. i. Ephidrosis; ii. Osmidrosis; iii. Chromidrosis; iv. Hæmidrosis; (b) *Sebiparous Glands*. i. Secretion increased; Stearrhœa: S. Simplex, S. Flavescens, S. Nigricans, S. Cyanea; Ichthyosis; Cornua. ii. Secretion suppressed: Zeroderma. iii. Secretion retained: Acne, Miliun, Molluscum, Atheroma. (c) *Lacteal Glands*. i. Hypertrophy; ii. Multiple glands; iii. Galactirrhœa.
5. *Diseases of the Hair and Hair-follicles*.—(a) Hairy nævi; (b) Alopecia—i. Congenital; ii. Senile; iii. Accidental; (c) Canities (Grey hair); (d) Albinismus; (e) Trichosis (Diseased hair); T. furfuracea; T. plica; (f) Trichiasis (Felting).

